ABSTRACT OF THE DISCLOSURE

An antenna switch diversity algorithm, and systems and methods to provide antenna diversity by implementing the algorithm in, for example, an IEEE 802.11a compliant environment, are presented. In accordance with the algorithm, one antenna of at least two antennas is designated as a default antenna at a communications device that sends and receives transmit and receive packets. The default antenna designation is changed depending on long-term and short-term learning processes implemented in, for example, software and hardware. The long-term and short-term learning processes analyze packet transmission and reception results of the antennas. The antenna switch diversity algorithm is applicable to multiple antennas.

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